

**ADDING IMPERCEPTIBLE NOISE TO AUDIO AND OTHER TYPES OF  
SIGNALS TO CAUSE SIGNIFICANT DEGRADATION WHEN  
COMPRESSED AND DECOMPRESSED**

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**ABSTRACT OF THE DISCLOSURE**

Primarily in order to discourage compression of data of signals intended for interfacing with humans, such as those containing audio content, particularly music, and thus to discourage the unauthorized reproduction and distribution of such content, such as over the Internet, the signal data is modified in a manner that is normally not perceptible to humans when the signal is reproduced but which causes the signal to be significantly degraded in a manner that is perceptible if the signal is later compressed and decompressed. In one embodiment, an audio signal is modified directly in a manner that causes significant degradation of the signal if it is compressed and subsequently decompressed. In another embodiment, a compressed version of an audio signal is modified, as part of a process of compressing the signal, in a manner that allows a good quality signal to result from a subsequent decompression but which results in a significant, perceptible degradation if this decompressed signal is again compressed and decompressed.

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